INTERNATIONAL CONFERENCE ON ECOTOXICOLOGY 2006

September 17 - 20, 2006
Wisła, Poland

ABSTRACTS

Organized by:

INSTITUTE OF ORGANIC INDUSTRY
BRANCH PSZCZYNA

In collaboration with:

POLISH SOCIETY OF ECOTOXICOLOGY
and
SECOTOX

12:20 - 12:35	Hormesis in *Lythrium salicaria* (L.) - L. Migliore
12:35 - 12:50	Plant colonization on reclaimed post-mining area (S. Poland) - G. Szarek-Łukaszewska
12:50 - 13:05	Avoidance of methamidophos to Japanese quail - M. Foudopulakis, C. Balaskas, A. Csato, G. Arapis, A.N. Riga-Karandinos
13:05 - 14:00	Lunch
	SESSION 3: Toxicity evaluations of surface and wastewaters **Chairpersons:** Grzegorz Nałęcz-Jawecki, Poland and Colin Janssen, Belgium
14:00 - 14:20	An in vitro model for screening estrogenic activity of bisphenol-A after metabolism - K.-W. Schramm, J. Janosek, N. Chahbane
14:20 - 14:35	Application of two short-term colorimetric bacterial assays: SOS-Chromotest and UMU-test for evaluation of genotoxicity and toxicity of cyanobacterial extracts from reservoir surface water - A. Bonisławska, K. Demkowicz-Dobrzański, J. Sawicki
14:35 - 14:50	Ecotoxicity of raw and processed agrochemical wastewater - J. Zieliński, A.K. Bin, E. Przybysz, M. Krawczyk, B. Morytz, M. Lewandowska, M. Szyderska
14:50 - 15:05	Analysis of new isoforms of cyanobacterial hepatotoxins from water, drinking water and biological metrials in Poland in period 1993 - 2005 - A.K.M. Kabziński
15:05 - 15:20	Microscale testing in field ecotoxicology - B. Sosak-Świderska, P. bieńkowski, I. Kostrzewska-Szlakowska
15:20 - 15:35	The seasonal changes of toxicity of sediments and soil from rivers and floodplains in central Poland and the sewage applied on willow plantation - a case study - A. Drobniewska, B. Sumorok, G. Nałęcz-Jawecki, J. Sawicki
15:35 - 16:00	Tea/Coffee break
16:00 - 17:00	Poster session (list of presented posters given below) **Chairpersons:** Krzysztof Demkowicz-Dobrzański, Poland and Guido Persoone, Belgium
19:00	Dinner, Red Restaurant, Golebiewski Hotel

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TRENDS AND PERSPECTIVES
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AVOIDANCE OF METHAMIDOPHOS TO JAPANESE QUAIL

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Bird risk assessment scenarios include intake via feed, generally considered to be the most important exposure route, and represent a realistic worst case assessment where the exposure scenarios are selected to reflect a situation where the total daily feed is contaminated. Avoidance is usually used to refine the risk as it may be a significant factor that reduces the exposure. It may be a chemically-mediated response to the active substance being a primary repellent, a secondary repellent or inducing anorexia. Indications may be seen in the dietary toxicity test (Luttik 1998).

This report describes test designs to determine the avoidance factor [AV-between 0 (complete avoidance) and 1 (no avoidance)] to japanese quail (Coturnix coturnix Japonica), after the exposure to the organophosphate pesticide methamidophos.

Studies in which food consumption is measured under appropriate conditions can be used to provide estimates of the avoidance factor (AV). There are different options to quantify the degree of avoidance. The determination of avoidance of treated food is possible either by a "choice test", in which both treated and untreated food are offered to the birds at the same time, or by a "no-choice test", in which only treated food are offered ad libitum during the exposure period, whereas the control receives untreated food (such as a LC_{50} dietary study).

In these laboratory studies, japanese quail showed strong avoidance (reduced consumption) of food treated with methamidophos.

In the typical avian dietary LC50 study, there was substantial avoidance at all tested concentrations with a dose response relation. Food consumption was measured daily, body weight at the beginning and end of the test day. Sublethal effects included lethargy, loss of coordination and lower limb weakness, while mortalities occurred on days

4-5 (due to starvation). Food consumption rose sharply to a similar level for all treated groups on the first day of the post-exposure period. The AV ranged from 0.03 to 0.77.

In the "choice test", at all the higher tested concentrations, the degree of avoidance increased from day 1 to day 5. No mortalities or other symptoms were observed. The AV ranged from 0.05 to 1 indicating that especially at the higher doses birds consumed only untreated food.

As a conclusion, under the conditions in this study, the avoidance response of japanese quail enables them to control their exposure to methamidophos.